

## CLIMATOLOGICAL DATA FOR OCTOBER, 1913.

## DISTRICT NO. 8, TEXAS AND RIO GRANDE VALLEY.

B. BUNNEMEYER, District Editor.

GENERAL SUMMARY.

October was colder than usual with a large excess of precipitation in the eastern portion of the district and a general shortage over the upper portions of the Rio Grande and Rio Pecos watersheds. The deficiency of temperature was general, except at a few of the higher mountain stations in New Mexico and at stations in the middle Rio Grande Valley, which reported slight excesses. Cold waves on the 26th and 29th gave minimum temperatures approaching the lowest record for October in many localities in Texas. Killing frosts occurred in northern New Mexico on the 7th, and were general in that State and in the northern and western portions of Texas between the 27th and 29th. Light frosts occurred nearly to the Texas coast line during this period. The precipitation was not well distributed. Many stations in southern New Mexico and several along the lower Texas coast received practically no moisture, while in many southwestern and eastern counties in Texas the total rainfall was the heaviest of record for October, making the average for the State of Texas for this month, with one exception, the greatest of record for October in the last 26 years. Most of the precipitation occurred during the first four days of the month, but generous to excessive local rains occurred also on other dates, principally on the 16th and 17th, and on the 22d and 23d. These rains flooded large areas of lowlands and caused much damage to property and to crops in the field. Outdoor work was practically at a standstill during the first half of the month in Texas.

The snowfall was light and confined to the higher mountain stations in Colorado and northern New Mexico. The heaviest monthly fall in Colorado was 13 inches at Platoro, and in New Mexico, 4 inches at Anchor Mine. In Texas traces of snow occurred at Plainview and Claytonville.

Sunshine was excessive in the western portion of the district and about normal in the eastern portion, except during the first decade, when there was much cloudy weather. The prevailing direction of the wind was from the southwest in Colorado and New Mexico, and from the south in Texas.

The average number of days with 0.01 inch or more of precipitation was 4 in Colorado, 2 in New Mexico, and 6 in Texas. The monthly amounts of precipitation ranged in Colorado from 0.29 inch at Garnett to 2.05 inches at Platoro; in New Mexico, from less than a measurable amount at 21 stations to 2.88 inches at Otis; and in Texas, from less than a measurable amount at 6 stations to 17.77 inches at Angleton, which is the heaviest amount of record for the State in October. Excessive precipitation of 2.50 inches or more in 24 consecutive hours occurred at 48

stations in Texas, the heaviest being 13.03 inches at San Marcos on the 2d and the next heaviest 12.19 inches at Galveston on the 22d.

TEMPERATURE.

The mean temperature deficiency was  $1.8^{\circ}$  in Colorado,  $0.6^{\circ}$  in New Mexico, and  $3.0^{\circ}$  in Texas. Temperatures were well above the normal during the first decade, and between the 12th and 16th, but the remainder of the month was persistently cool, especially the last five days, when freezing weather occurred in all sections, except in the southeastern third of Texas. The highest temperatures were recorded on various dates between the 2d and 9th, or on the 13th or 14th, and the lowest between the 26th and 30th. The daily range of temperature varied from about  $12^{\circ}$  on the Texas coast to about  $41^{\circ}$  at the higher mountain stations.

The highest and lowest temperatures reported were, respectively, in Colorado,  $75^{\circ}$  at Saguache on the 2d, and  $2^{\circ}$  at Hermit on the 10th; in New Mexico,  $93^{\circ}$  at Glorieta Ranch on the 1st and  $11^{\circ}$  at Tres Piedras on the 26th, and in Texas,  $100^{\circ}$  at Falfurrias on the 6th and 8th, and  $20^{\circ}$  at Mount Blanco on the 28th and at Albany on the 30th. The local monthly means ranged from  $34.2^{\circ}$  to  $46^{\circ}$  in Colorado, from  $40.6^{\circ}$  to  $62.1^{\circ}$  in New Mexico, and from  $57.6^{\circ}$  to  $77^{\circ}$  in Texas.

PRECIPITATION.

The precipitation over the Rio Grande watershed was decidedly deficient, except over a short stretch between Del Rio and Fort McIntosh, Tex., which had heavy rains during the first three days of the month. Most of the stations in the southern half of New Mexico received less than a measurable amount of moisture. The average for the watershed was 0.75 inch, which is 0.38 inch less than the normal.

The Rio Pecos watershed also showed a decided deficiency of precipitation, which was most marked in the upper portion. The average for the watershed was 0.93 inch, which is 0.43 inch below the normal.

The Texas watersheds received a surplus of moisture, with excesses ranging from 1.18 inches for the Neches drainage area to 6.35 inches for that of the Guadalupe. The excess was general except over the lower coastal plains and lower Guadalupe Valley, and at a few stations in the middle Neches watershed. The following are the average monthly amounts in inches and hundredths for the various Texas watersheds: Nueces, 5.65; San Antonio, 7.88; Guadalupe, 8.19; Lavaca, 6.16; Colorado, 5.10; Brazos, 4.32; Trinity, 4.07; Neches, 4.07; Sabine, 4.68; and coastal plains, 4.35.

## RIVER CONDITIONS.

The San Antonio and Guadalupe Rivers were well above flood stage for several days following the excessive rains of the 1st and 2d, and the sudden rises resulted in much damage. The Guadalupe broke all previous records of high water. The Rio Grande, Colorado, and Sabine were at flood stage in their lower portions for several days during the first decade, while sharp rises occurred in the remaining Texas streams. The warnings issued for these floods resulted in a saving of property so far as reported amounting to \$151,000, while the total loss from returns

received amounts to \$1,117,015, including \$110,665 loss suffered by railroad and telegraph companies.

## MISCELLANEOUS PHENOMENA.

*Severe storm.*—A violent local storm, probably tornadic in character, occurred in Kaufman County, Tex., on the 16th at about 4 p. m. It traveled slowly in a northeasterly direction and passed out over the eastern border of the county just north of the Texas & Pacific Railway, destroying all cotton, corn, and timber in its path and wrecking one house.

TABLE I.—Climatological data for October, 1913. District No. 8, Texas and Rio Grande Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of partly cloudy days.	Number of cloudy days.			
<b>Colorado.</b>																				
Blanca.....	Costilla.....	7,865	4	41.6	.....	68	12†	8	26	47	0.66	.....	0.40	0	2	29	2	w.	Lewis F. Botens.	
Cumbres.....	Conejos.....	10,015	6	.....	.....	.....	.....	11	26	48	1.17	-0.32	0.98	3.5	5	17	13	sw.	Mrs. Ida M. Lively.	
Garnett.....	Costilla.....	7,576	20	41.4	-1.0	73	14	9	26	48	0.29	.....	0.18	0	2	17	12	nw.	Charles Speiser.	
Hermit.....	Hinsdale.....	9,843	6	34.2	.....	64	15	2	10	44	1.34	.....	0.50	4.0	7	16	6	sw.	Miss Marion Mason.	
La Veta Pass.....	Costilla.....	9,000	3	.....	.....	.....	.....	11	26	48	0.75	.....	0.55	9.0	3	14	15	sw.	Clara M. Wright.	
Manassa.....	Conejos.....	7,700	7	42.7	.....	73*	12	66	26	52	0.74	.....	0.38	0	2	20*	6*	w.	J. B. Chapman.	
Platotoro.....	do.....	7,675	6	.....	.....	.....	.....	11	26	52	2.05	.....	1.12	13.0	6	20	9	w.	Walter R. Hook.	
Saguache.....	Saguache.....	7,740	21	46.0	+ 0.4	75	2†	11	29	49	0.70	-0.08	0.45	T.	3	12	5	w.	Eugene Williams.	
San Luis.....	Costilla.....	7,794	22	41.6	-3.6	70	13	11	29	49	0.36	-0.73	0.22	0	2	16	15	sw.	P. B. Albright.	
Wagon Wheel Gap Experimental Station.....	Mineral.....	9,610	14	35.1	-2.9	56	12	13	26	31	0.82	-0.60	0.30	3.4	7	13	12	sw.	U. S. Weather Bureau.	
<b>New Mexico.</b>																				
Agricultural College.....	Dona Ana.....	3,863	52	60.2	-1.8	86	14	25	27	49	T.	-0.68	T.	0	0	21	6	sw.	New Mexico Agricultural College.	
Alamogordo (near).....	Otero.....	4,338	16	59.1	-0.9	87	1	25	27	43	0.00	-0.76	0.00	0	0	27	4	sw.	Edward Le Breton.	
Alamogordo.....	do.....	4,320	4	58.4	.....	82	14	29	27	33	0.00	.....	0.00	0	0	31	0	s.	Agent E. P. & S. W. R. R.	
Alamos Ranch.....	Sandoval.....	7,800	3	.....	.....	.....	.....	11	26	48	0.98	.....	0.48	0	2	26	4	sw.	H. H. Brook.	
Albuquerque.....	Bernalillo.....	4,960	37	.....	.....	.....	.....	11	26	48	0.31	-0.38	0.30	0	2	12	14	e.	Pitt Ross, C. E.	
Ancho.....	Lincoln.....	6,112	4	.....	.....	.....	.....	11	26	48	0.97	.....	0.74	4.0	2	10	15	w.	Agent E. P. & S. W. R. R.	
Anchor Mine.....	Taos.....	10,600	2	.....	.....	.....	.....	11	26	48	0.94	.....	0.31	0	0	18	5	se.	C. H. Brigham.	
Artesia.....	Eddy.....	3,350	5	59.4	.....	89	14	21	29	51	0.80	.....	0.21	1.8	5	13	18	sw.	Will Benson, C. E.	
Aspen Grove Ranch.....	Rio Arriba.....	9,000	4	.....	.....	.....	.....	11	26	48	0.97	.....	0.77	T.	2	25	5	w.	Junius D. Maupin.	
Batemans Ranch.....	do.....	8,900	4	.....	.....	.....	.....	11	26	48	0.00	.....	0.00	0	0	20	11	nw.	John W. Bateman.	
Berino.....	Dona Ana.....	3,788	2	.....	.....	.....	.....	11	26	48	0.00	.....	0.00	0	0	11	0	sw.	J. C. Rishabergel.	
Bluewater.....	Valencia.....	6,732	11	47.6	-0.5	75	1	14	27	51	1.20	+ 0.20	1.20	0	1	20	11	sw.	Bluewater Development Co.	
Boaz.....	Chaves.....	4,154	4	57.0	.....	86	14	20	26	47	0.75	.....	0.47	0	0	22	8	sw.	William Horner.	
Capitan.....	Lincoln.....	6,348	4	.....	.....	.....	.....	11	26	48	T.	.....	T.	0	0	7	19	sw.	Agent E. P. & S. W. R. R.	
Carlsbad.....	Eddy.....	3,120	18	62.1	-1.0	89	25	25	29	62	1.03	-0.13	0.49	0	0	19	7	sw.	U. S. Reclamation Service.	
Carrizozo.....	Lincoln.....	5,438	5	54.1	.....	78	3†	26	30	42	0.00	.....	0.00	0	0	31	0	w.	Agent E. P. & S. W. R. R.	
Cerrillos (near).....	Santa Fe.....	5,700	1	49.9	.....	78	23	17	28	50	0.25	.....	0.20	0	0	19	8	sw.	Irving C. Sweet.	
Chama.....	Rio Arriba.....	7,851	15	42.3	-4.4	69	12	13	26	40	1.08	-0.42	1.00	1.0	0	2	28	3	sw.	Frank C. Johnson.
Cloudcroft.....	Otero.....	8,650	11	48.4	+ 3.5	64	5	18	25	38	0.00	-1.39	0.00	0	0	26	5	sw.	Agent E. P. & S. W. R. R.	
Corona.....	Lincoln.....	6,068	4	51.3	.....	76	12	18	29	49	0.09	.....	0.09	0	1	8	22	w.	Do.	
Coyote.....	do.....	5,800	4	.....	.....	.....	.....	11	26	48	0.35	.....	0.35	0	1	25	2	sw.	Do.	
Cundiyo.....	Santa Fe.....	6,889	4	.....	.....	.....	.....	11	26	48	0.13	.....	0.13	0	1	24	6	w.	Juan Vilij.	
Demonstration Farm.....	San Miguel.....	6,800	4	.....	.....	.....	.....	11	26	48	0.05	.....	0.05	0	1	20	3	sw.	C. C. Clayton.	
Duran.....	Torrance.....	6,272	4	53.1	.....	77	12	22	26†	42	0.38	.....	0.22	0	3	20	3	sw.	Agent E. P. & S. W. R. R.	
Eida.....	Roosevelt.....	4,345	1	.....	.....	.....	.....	11	26	48	0.00	.....	0.00	0	0	25	5	sw.	A. J. Evans.	
Escondido.....	Otero.....	4,014	4	.....	.....	.....	.....	11	26	48	0.17	-0.74	0.13	0	2	25	4	sw.	Agent E. P. & S. W. R. R.	
Espanola.....	Rio Arriba.....	5,590	15	51.4	-0.4	80	1	18	26	48	0.17	-0.74	0.13	0	2	19	9	sw.	Mrs. Ella F. McBride.	
Estancia.....	Torrance.....	6,140	8	50.6	.....	82	12	15	26†	63	0.12	-1.00	0.12	0	1	19	3	w.	Estancia Drug Co.	
Flourine.....	Socorro.....	7,000	1	.....	.....	.....	.....	11	26	48	0.80	.....	0.34	0	2	23	5	sw.	Frank P. Davis.	
Fort Stanton.....	Lincoln.....	6,231	36	53.3	+ 1.4	82	9†	17	30	52	0.70	-0.65	0.30	0	3	22	8	sw.	U. S. Sanitarium.	
Fort Sumner.....	Guadalupe.....	3,960	5	55.3	.....	85	14	17	29	52	0.59	.....	0.26	0	5	21	8	sw.	Perter Yocky.	
Gallinas.....	Lincoln.....	6,835	4	.....	.....	.....	.....	11	26	48	0.28	.....	0.18	0	2	26	4	sw.	Agent E. P. & S. W. R. R.	
Gallinas Planting Station.....	San Miguel.....	7,300	6	46.04	.....	744	14	14	26†	48	0.30	.....	0.30	0	1	21	7	sw.	Agent E. P. & S. W. R. R.	
Glorietta Ranch.....	Socorro.....	6,300	3	59.0	.....	93	1†	24	27	53	0.30	.....	0.30	0	1	26	4	s.	Charles M. Crossman.	
Harveys Upper Ranch.....	San Miguel.....	9,400	4	43.2	.....	70	12	12	31	38	0.51	.....	0.35	0.5	4	23	6	w.	R. B. Schoonmaker.	
Hobbs.....	Eddy.....	3,800	5	57.6	.....	81	2†	29	30	40	1.99	.....	1.05	0	2	20	6	sw.	E. H. Byers.	
Hondo Reservoir.....	Chaves.....	3,904	4	58.2	.....	86	14†	23	27	46	1.32	.....	0.89	0	3	20	8	sw.	U. S. Reclamation Service.	
Jemez Springs.....	Sandoval.....	6,100	3	50.9	.....	73	3†	24	29	41	0.88	.....	0.08	0	1	24	3	sw.	Mrs. Linus L. Shields.	
Knowles (near).....	Eddy.....	4,300	3	57.4	.....	82	7†	20	29	41	2.53	.....	2.02	0	3	19	8	sw.	J. W. Mosley.	
Laguna.....	Valencia.....	5,840	8	53.0	.....	79	18†	24	11	52	0.85	-0.03	0.35	0	3	11	4	w.	Guss Weiss.	
Lagunita.....	Guadalupe.....	4,500	8	56.0†	.....	80†	13	19	47	19	1.19	.....	0.96	0	3	11	4	w.	P. A. Turnbull.	
Lake Valley.....	Sierra.....	5,412	8	58.0	.....	82	14	17	30	48	0.53	.....	0.32	0	3	24	7	sw.	William P. Keil.	
Lakewood (near).....	Eddy.....	3,170	1	59.2	.....	90	14	23	29	47	1.25	.....	0.77	0	4	25	2	sw.	Mrs. Linus L. Nelson.	
Lanark.....	Dona Ana.....	4,156	14	.....	.....	76	14	20	27†	48	0.00	-0.65	0.00	0	0	6	24	1	sw.	Agent So. Pac. R. R.
Las Vegas.....	San Miguel.....	6,385	26	47.9	-1.7	76	14	20	27†	48	0.00	-1.06	0.00	0	0	23	0	sw.	New Mexico Normal University.	
Los Lunas (near).....	Valencia.....	4,800	24	53.1	-0.5	85	2	19	27	48	0.00	-0.88	0.00	0	0	17	14	0	sw.	Richard Pohl.
Magdalena.....	Socorro.....	6,556	8	53.3	.....	75	13†	24	29	40	1.99	-0.19	0.35	0	2	25	5	sw.	William Pender.	
Mescalero.....	Otero.....	6,627	2	49.8	.....	78	2	18	27	40	0.11	.....	0.06	0	2	25	2	sw.	Rev. R. H. Harper.	
Mineral Hill.....	San Miguel.....	7,050	8	.....	.....	.....	.....	11	26	48	0.21	.....	0.21	T.	1	6	24	1	sw.	W. M. Nelson.
Monterey.....	Otero.....	4,436	4	.....	.....	.....	.....	11	26	48	0.02	.....	0.02	0	1	26	3	sw.	Agent E. P. & S. W. R. R.	
Morlarty.....	Torrance.....	6,204	11	50.5	+ 0.1	70	1†	14	27	48	0.47	.....	0.35	0	2	31	5	sw.	Harry J. Fincke.	
Mountainair.....	do.....	6,390	11	50.5	+ 0.1	70	1†	14	27	48	0.12	.....	0.06	0	3	22	5	sw.	Miss Julia Hill.	
Mountain Park.....	Otero.....	7,100	1	.....	.....	82	7†	20	29	41	2.53	.....	2.17	0	5	21	4	sw.	Charles E. Beasley.	
Nogal (near).....	do.....	3,989	4	.....	.....	84	14	17	33	42	2.05	.....	1.40	0	4	15	11	sw.	Agent E. P. & S. W. R. R.	
Noria.....	Lincoln.....	8,000	8	.....	.....	86	14	25	36	48	0.80	.....	0.51	0	2	25	2	sw.	H. E. Kellar.	
Orogrande.....	Otero.....	4																		

TABLE 1.—*Climatological data for October, 1913. District No. 8—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<b>New Mexico—Contd.</b>																				
Tularosa.	Otero.	5,952	4								T.	0	0	24	4	3	sw.	I. L. Fairless.		
Vaughn.	Guadalupe.	5,952	4								T.	0	0	21	6	4	w.	Agent E. P. & S. W. R. R.		
Virsylvia.	Taos.	7,500	3								T.	0	0	17	13	1	sw.	Ernest Kennedy.		
Willard.	Torrance.	6,086	1	50.4	+ 0.2	79	13†	13	29	60	T.	- 1.14	0.36	T.	4	5	se.	Dr. V. G. Cheyney.		
Winsors.	San Miguel.	8,200	17	42.2	+ 0.2	64	14	14	29	41	0.60							James F. Matty.		
<b>Texas.</b>																				
Abilene.	Taylor.	1,738	28	61.6	- 2.6	86	5	30	29	32	3.88	+ 1.55	2.02	0	7	10	11	s.	U. S. Weather Bureau.	
Albany.	Shackelford.	1,439	19	58.7	- 5.8	88	8	20	30	43	3.27	+ 1.19	1.54	0	5	14	7	sw.	N. L. Bartholomew.	
Alice.	Jim Wells.	209	21	71.7		92	10	32	27	43	0.45		0.25	0	5	14	4	se.	R. M. Boerum.	
Alpine.	Brewster.	4,482	3								2.75		1.70	0	5	26	0	5	ne.	H. B. Cowles.
Alvin.	Brazoria.	49	15	66.0		86	6†	36	30	34	11.47	+ 6.65	2.57	0	8	12	8	11	Alvin Japanese Nursery.	
Anahua.	Chambers.	23	4								9.15		4.60	0	10				Lone Star Canal Co.	
Angleton.	Brazoria.			67.2		90	8	36	30	32	17.77		9.00	0	10	11	12	8	N. C. Winters.	
Antelope.	Jack.		2								4.61		2.00	0	6	16	9	6	Paul Rudolph.	
Aspermont.	Stonewall.										4.77		1.93	0	5	21	1	9	Bryant Link Co.	
Austin.	Travis.	593	57	64.5	- 3.0	88	6	33	29†	41	8.92	+ 6.09	4.64	0	7	19	5	ne.	A. Deussen.	
Ballinger.	Runnels.	1,637	17	64.8	+ 0.3	93	5	26	27	43	2.28	+ 0.10	1.12	0	6	11	10	10	E. M. Eubank.	
Barstow.	Ward.	2,573	6	62.8		99	8†	21	30	50	3.10		1.10	0	5	15	9	7	F. P. Ingerson.	
Bay City.	Matagorda.	53	3	68.2		86	5	42	27	42	9.39		4.52	0	9	15	4	12	E. C. Quereau.	
Beaumont.	Jefferson.		29	69.2	- 2.2	92	7†	40	27	29	5.21	+ 2.38	2.89	0	10	15	0	13	John Bender.	
Beeville.	Bee.	225	17	67.6	- 4.5	92	6†	30	27	49	2.84	+ 0.33	0.69	0	7	15	0	16	Geo. E. Faupel.	
Big Spring.	Howard.	2,396	15	63.0	- 1.2	88	7†	26	27†	53	3.22		1.68	1.09	0	5	20	5	6	S. B. Reagan.
Blanco.	Blanco.	1,350	17	65.1	- 1.9	90	5†	27	30	38	11.27	+ 8.20	5.06	0	7	21	4	6	R. C. Crist.	
Boerne.	Kendall.	1,412	21	62.1	- 4.6	90	5†	25	29	45	16.37	+ 13.39	9.04	0	7	11	8	12	F. W. Schweppé.	
Booth.	Fort Bend.	81	12								8.80	+ 5.30	4.02	0	9	23	0	8	T. R. Booth.	
Bowie.	Montague.	1,113	18	62.2	- 4.2	89	5†	28	29	37	2.90		0.09	0	6	14	10	7	Craig Anderson.	
Brazoria.	Brazoria.	25	24	69.0	- 1.2	93	5	39	27	35	8.09	+ 4.64	3.97	0	9	21	5	5	Mrs. A. Stevens.	
Brazos.	Palo Pinto.	801	4								3.70		1.42	0	6	16	5	10	Robt. E. Bovett.	
Brenham.	Washington.	350	28	65.6	- 4.2	88	8†	37	30	34	7.13	+ 4.37	1.67	0	10	14	1	16	Mrs. B. F. Sloan.	
Bridgeport.	Wise.	754	4								5.48		2.50	0	6	8	15	8	Claud Strange.	
Brighton.	Neuces.	12	20	74.0	- 0.2	92	9	39	27	35	0.00	- 1.93	0.00	0	0	30	0	1	G. H. Ritter.	
Brownsville.	Cameron.	38	49	73.8	- 0.6	93	5	45	27	30	1.76		1.45	0.06	0	6			U. S. Weather Bureau.	
Brownwood.	Brown.	1,342	21	61.6	- 4.1	95	4	28	30†	43	3.66	+ 1.63	1.32	0	8	22	1	8	Mrs. Pearl Smith.	
Bryan.	Brazos.			65.4		91	7	35	20†	35	5.59		2.20	0	5	16	4	11	John Daly, Jr.	
Buena Vista.	Pecos.		1								0.64		0.28	0	4	23	5	3	W. H. Denis.	
Cameron.	Milan.		5															J. E. Watts.		
Carrión Springs.	Polk.	330	5	60.5		90	11	29	30	38	4.58		1.23	0	10	11	7	7	M. S. Spitzer.	
Claytonville.	Dimmitt.	1	70.1			90	5†	34	30	43	4.10		1.60	0	4	16	0	15	M. E. Cook.	
Claburne.	Fisher.	2,100	18	63.0	- 0.6	87	6†	26	29	47	2.47	+ 0.02	0.88	T.	6	10	8	7	Wm. Lanius.	
Clifton.	Johnson.	758	8	63.7		92	8	27	30	40	3.79		1.65	0	7	18	1	12	W. S. Ownsby.	
Coleman.	Bosque.	671	2								5.51		2.23	0	6	11	12	8	R. M. Jones.	
Collegeport.	Coleman.	1,710	19	64.6	- 1.1	90	5†	29	30	42	2.93	+ 0.76	1.43	0	6	9	18	4	J. E. Stevens.	
College Station.	Matagorda.		1															H. A. Clapp.		
Colorado.	Brazos.	308	23	65.8	- 3.6	92	6	33	30	36	4.43	+ 1.60	1.24	0	12	12	3	16	Prof. G. S. Fraps.	
Columbus.	Mitchell.	2,066	19	65.4	+ 1.4	89	5†	36	28	46	2.60	+ 0.97	0.86	0	4				R. M. Webb.	
Comanche.	Colorado.	206	9								7.05		3.18	0	9	16	0	15	Mrs. Sophie Bridge.	
Corpus Christi.	Comanche.	1,358	7	64.7		90	1†	29	29	39	5.47		1.85	0	5	13*	7*	6*	W. T. Nabers.	
Corsicana.	Nueces.	20	26	71.9	- 0.7	87	5	45	27	30	0.43		1.62	0.27	0	4	14	12	5	U. S. Weather Bureau.
Cotulla.	Navarro.	445	24	61.8	- 5.4	85	7†	33	20†	36	2.88	+ 0.14	1.02	0	9	17	3	11	D. H. Winn.	
Crockett.	La Salle.	425	6								4.80		4.00	0	4				Holland Agricultural Co.	
Houston.	Valverde.	350	9	65.5		91	8	33	30	31	5.21		1.18	0	11	19	4	8	A. M. Rencher.	
Cuero.	De Witt.	177	23	69.4	- 2.2	95	5	36	27	42	3.86	+ 1.05	2.40	0	7	17	3	11	H. R. Eisenlohr.	
Dallas.	Dallas.	466	24	62.1	- 3.8	90	5†	30	30	40	3.40	+ 0.88	1.19	0	10	14	1	16	H. P. Hermansen.	
Danevang.	Wharton.	145	17								0.00		0.00	0	7	16	8	7	U. S. Weather Bureau.	
Del Rio.	Val Verde.	852	7	67.3	- 2.6	88	5	32	27	37	3.78	+ 2.29	1.89	0	7	16	8	7	se.	
Denton.	Denton.	621	16	62.2		89	5	26	29†	38	2.38		0.58	0	8	18	7	6	T. W. Buell.	
Devine.	Medina.	653	3	70.2		91	14	31	27	41	5.70		5.20	0	2	20	6	5	M. A. Keller.	
Dialville.	Cherokee.	575	10	64.8	- 2.5	89	9	32	30	33	6.22	+ 3.12	1.70	0	10	14	8	9	J. M. B. McKnight.	
Dilley.	Frio.	569	3								0.00		0.00	0	7	12	156	26	John W. Miller.	
Dublin.	Erath.	1,466	17	66.6	- 4.8	90	6	29	27†	41	3.28	+ 0.46	1.41	0	7	12b	156	26	Jno. O. Shafer.	
Duval.	Travis.	820	24	65.6	- 4.5	86	7†	35	30	34	7.35	+ 4.35	4.49	0	5	16	4	11	J. C. Edgar.	
Eagle Pass.	Maverick.	800	36	70.6	- 0.9	96	7	34	27	46	4.33	+ 2.75	1.70	0	5	17	8	6	Charles Traver.	
Eastland.	Eastland.	1,420	6	60.4		89	13	24	30	48	2.20		0.70	0	5	19	10	2	James A. Beard.	
Edna.	Jackson.	71	4								4.46		1.75	0	8				E. L. Faires.	
El Paso.	El Paso.	3,762	34	63.6	+ 1.2	87	14	34	29	37	T.	- 0.95	0	0	19	9	3	w.	U. S. Weather Bureau.	
Encinal.	La Salle.	553	5															Walter Pettit.		
Fairland.	Burnet.	1,000	24	66.5	- 0.9	91	6†	31	30	51	6.68	+ 4.66	3.20	0	7	20	4	7	R. L. Bush.	
Falfurrias.	Brooks.	5	74.2			100	6†	32	27	46	0.54		0.23	0	3	23	4	4	W. A. Gardener.	
Flatonia.	Fayette.	465	1	67.8		91	7†	35	27†	36	8.00		3.93	0	9	17	5	9	Fred W. Laux.	
Flint.	Smith.	483	3	63.8		95	6	32	30	52	4.90		0	10	15	4	12	F. C. C. Carter.		
Fort Clark.	Kinney.	1,050	42	66.2	- 3.7	88	9	33	27	37	3.59	+ 1.91	1.80	0	4	23	0	8	Post Hospital.	
Fort Davis.	Jeff Davis.	5,000	45	77.0	+ 3.6	97	5	31	30	54	5.68	+ 4.52	3.35	0	6</					

TABLE 1.—Climatological data for October, 1913. District No. 8—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Greatest in 24 hours.	Total snowfall, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.									
Texas—Continued.																				
Henderson.	Rusk.	500	4									5.52		1.58	0	8	15	7	9	
Hewitt.	McLennan.	664	18									3.54	+ 0.19	1.63	0	5	19	3	9	
Hico.	Hamilton.		2									1.79		0.35	0	4			s.	
Hillsboro.	Hill.	828	10	62.4	— 6.2	90	8	32	29†	41	2.49	— 0.44	0.75	0	6	7	16	4	11	
Hondo.	Medina.	901	14	63.4	— 6.2	88	7	36	28	37	6.48	+ 4.23	3.25	0	7	11	11	9	se.	
Houston.	Harris.	133	23	67.7	— 2.6	91	8	40	30	33	9.86	+ 6.44	4.62	0	12	11	11	0	16	
Huntsville.	Walker.	400	29	63.6	— 4.7	87	9†	33	30	35	7.81	+ 4.70	2.34	0	8	15	4	15	s.	
Jayton.	Kent.		3									3.60		1.50	0	4			18	
Jewett.	Leon.	496	9	63.6		92	7	32	30†	40	3.10		1.35	0	5	15	10	6	s.	
Junction.	Kimble.	1,645	12																Judge John S. Durst.	
Kaufman.	Kaufman.	448	14	63.3	— 4.0	88	8	31	29†	32	2.72	— 0.89	0.65	0	9	16	7	8	s.	
Kerrville.	Kerr.	1,650	17	64.2	— 1.2	88	5†	27	30	41	6.45	+ 3.92	1.38	0	7	15	11	5	se.	
Knickerbocker.	Tom Green.	2,050	9	63.6		90	7	22	27	47	3.87		2.00	0	7	19	7	5	n.	
Kopperl.	Bosque.	578	16									4.30	+ 0.71	1.00	0	5	11	7	13	ne.
Lagrange.	Fayette.	276	3									7.54		3.49	0	13	16	2	13	se.
Lamesa.	Dawson.	2,500	3									6.62		4.28	0	3				S. D. Austin.
Lampasas.	Lampasas.	1,026	21	62.0	— 4.5	87	5†	27	31	41	4.40	+ 1.57	2.69	0	6	20	0	11	Mrs. K. I. Webber.	
La Parra.	Willacy.	38	11									0.28	— 2.13	0.25	0	1				Mrs. A. H. Jackson.
Laredo.	Webb.	421																	Matt Cody.	
Laureles Ranch.	Nueces.	20	13									0.00	— 2.15	0.00	0	0				Mrs. Fannie Sneed.
Liberty.	Liberty.	38	9	67.2		93	8	35	30	38	9.13		2.30	0	10	22	3	6	n.	
Llano.	Llano.	1,040	22	64.0	— 4.6	89	6	31	30	40	4.90	+ 2.78	1.90	0	8	16	10	5	ne.	
Llano Grande.	Hidalgo.	86	5	71.8		96	4	37	28	44	2.08		1.18	0	2	11	20	0	se.	
Long Lake.	Anderson.	229	8									4.60		1.40	0	5	11	8	12	n.
Longview.	Gregg.	336	27	62.2	— 4.0	88	8	34	29†	37	8.36	+ 5.34	1.90	0	9	20	3	8	se.	
Lubbock.	Lubbock.	2	59.2			88	23	21	29	52	1.53		0.59	0	8	17	7	7	sw.	
Lufkin.	Angelina.	325	6	64.9		90	6†	33	27†	38	4.12		0.53	0	6	22	2	7	s.	
Luling.	Caldwell.	418	24	67.6	— 2.7	90	6†	36	27	36	10.12	+ 7.67	7.57	0	9	15	8	8	n.	
Lyford.	Cameron.																	John Carter.		
McGregor.	McLennan.	713	3	62.2								3.35		1.45	0	3	21*	6*	3*	n.
McKinney.	Collin.	612	11	62.2		89	5	27	30	38	2.61	— 0.53	1.08	0	10	13	6	12	sw.	
Marathon.	Brewster.	4,043	3	59.4		81	7	24	29	40	1.85		0.55	0	5	23	6	2	e.	
Marble Falls.	Burnet.	771	5									6.18		2.80	0	6	22	0	9	s.
Maria.	Presidio.											0.90		0.40	0	3				Lee Scott.
Marshall.	Harrison.	375	12	63.9		90	8	31	30	35	5.67	+ 2.88	2.20	0	10	6	16	9	s.	
Matagorda.	Matagorda.	12	3									5.20		4.21	0	11	17	10	4	sw.
Mexia.	Limestone.	537	9	62.3		90	7	32	29†	36	5.55		2.70	0	9	12	7	12	n.	
Midland.	Midland.	10	60.8	85	7	26	27†	41	2.80	+ 1.88	1.15	0	7	8	17	6	sw.	A. G. Graham.		
Mission.	Hidalgo.	140	3															Roy Conway.		
Mont Belvieu.	Chambers.	65	3															A. R. Shearer.		
Montell.	Uvalde.		1									5.04		1.42	0	5	13	8	10	se.
Mount Blanco.	Crosby.	2,750	24	57.8	— 3.8	83	5†	20	28	42	4.37	+ 0.26	1.03	0	4	16	10	5	s.	
Nacogdoches.	Nacogdoches.	271	14	62.6	— 3.5	89	10	33	27†	37	3.81	— 0.40	4.02	0	10	18	4	9	n.	
New Braunfels.	Comal.	720	24	65.6	— 3.3	86	4†	35	27	38	12.78	+ 10.42	7.97	0	3	16	9	6	se.	
Palestine.	Anderson.	510	31	63.2	— 3.0	89	8	32	29	26	4.09	+ 0.49	1.59	0	9	18	3	10	s.	
Panter.	Hood.	1,000	24									3.30	+ 0.58	1.48	0	7				E. H. Snyder.
Pearlall.	Frio.	629	3									3.64		3.12	0	3				Earnest De Villois.
Pierce.	Wharton.	102	7	69.8		92	6	43	30	28	7.43		3.73	0	11	16	0	15	R. B. Pointer.	
Plainview.	Hale.	3,370	17	57.7	— 3.0	84	5	21	29	48	1.24	— 0.36	0.60	T.	5	12	9	10	s.	
Port Lavaca.	Calhoun.	20	12									1.92		0.87	0	5	14	5	12	n.
Post.	Garza.	2,700	3									3.77		1.27	0	6	18	0	13	se.
Raymondville.	Callahan.	1,591	2											0.73	0	6	13	4	se.	
Ricardo.	Cameron.	2	72.8			97	7	36	27	40	2.12		0.30	0	2	15	7	9	se.	
Rio Grande.	Nueces.	57	4	71.4		95	5	30	27	45	0.45		0.00	— 1.57	0	0	19	8	4	se.
Riverside.	Star.											5.12		1.75	0	8	17	2	12	n.
Rockland.	Walker.	169	9									5.20		0.65	0	5	13	7	11	sw.
Rockport**.	Tyler.	136	9									5.12		1.75	0	8	17	2	12	Mack Dunkin.
Rosselle.	Aranas.	12	72.0	— 1.0		87	7	43	29	29	1.07		— 2.40	0	0.25	7	19*	7*	e.	
Rutledge.	Atascosa.	558	6	65.7		86	8	30	27	41	9.94		0.54	0	12	11	11	9	sw.	
Runge.	Karnes.	308	18									0.34	— 0.26	1.29	0	2				W. F. M. Ross.
Sabinal.	Sabinal.	964	9	67.8		95	7	33	27	40	9.54		5.36	0	5	17	10	4	se.	
Salado.	Bell.											6.06		3.60	0	4	11	8	12	H. W. Reilly.
San Angelo.	Tom Green.	1,847	22	62.5	— 3.2	89	5†	27	41	31	3.19	+ 1.27	1.80	0	4	16	8	7	L. M. Crockett.	
San Antonio.	Bexar.	701	28	67.0	— 2.2	91	7	36	26	38	8.86	+ 7.37	7.05	0	7	18	9	4	Sam Crowther.	
San Augustine.	San Augustine.	360	4	64.2		90	8†	31	28	40	2.75		0.54	0	12	11	11	9	se.	
San Juanito.	Hidalgo.											0.46		1.08	0	5	6	5	20	F. A. Wilson.
San Marcos.	Hays.	558	20	65.0	— 3.2	86	7	33	27†	41	15.54	+ 12.55	13.03	0	4	17	0	14	J. B. McAlen.	
San Saba.	San Saba.	1,712	12	62.5	— 3.1	87	5†	28	30	38	5.64	+ 3.04	2.08	0	6	20	4	7	Miss L. C. Ford.	
Santa Anna.	Coleman.	1,744																Jas. Burns.		
Santa Gertrudes.	Nueces.	13																L. L. Shield.		
Sealy.	Austin.	201	2									8.44		4.21	0	10	7	14	J. B. Wright, jr.	
Seymour.	Baylor.	1,320	7	62.6		93	24	26	29	37	2.20		0.55	0	5	22	0	9	O. H. Albert.	
Somerville.	Scurry.	2	58.8			88	8	27	29†	38	3.45		1.60	0	5	23	4	5	T. J. North.	
Sonora.	Burleson.	251	4	67.2		92	8	32	30	41	4.40		1.50	0	6	20	4	7	Ed. Herbst.	
Spur.	Sutton.	2,200	9	63.8		93	7	21	20	45	1.63		1.05	0	6	16	2*	12*	C. R. Myers.	
Stamford.	Dickens.	2,300	2	58.2		88	6	25	27†	44	2.93		1.99	0	6	16	5	10	J. D. Reagan.	
Jones.	Smith.	2	58.8			88														

TABLE 2.—*Daily precipitation for October, 1913. District No. 8, Texas and Rio Grande Valley.*

TABLE 2.—*Daily precipitation for October, 1913. District No. 8—Continued.*

TABLE 2.—*Daily precipitation for October, 1913. District No. 8—Continued.*

Stations.	Watershed.	Day of month.																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.	
<b>Texas—Continued.</b>																																		
Houston.	Coast.	.46	.40	.65	.36																													9.86
Huntsville	Trinity	.47	2.01	.13	.11	2.34																											7.81	
Jayton.	Brazos.	.50	1.00	.60																													3.60	
Jewett	Trinity	T.	1.35	.10	T.																												3.10	
Junction.	Colorado.																																	
Kaufman.	Trinity	.15	.64	T.	.16																												2.72	
Kerrville	Guadalupe	1.72	2.38	.31	.52	.08																										6.45		
Knickerbocker.	Colorado.	.16	2.00	.99	.16																												3.87	
Kopperl	Brazos.	T.	1.00	.90	.40																												4.30	
Lagrange.	Colorado.	.65	3.40	.99	1.00	.02																										7.54		
Lamesa.	do.	4.28	.60																														6.02	
Lampasas	Brazos.	.35	2.34	.42	.25																												4.40	
La Parra.	Coast.	.25																															0.25	
Laredo	Rio Grande.																																	
Laureles Ranch.	Coast.																																	
Liberty	Trinity	2.30	1.84	.77	.03	.23																										9.13		
Llano.	Colorado.	.04	1.57	.77	.29	.02																										4.90		
Llano Grande	Rio Grande.	T.	T.	T.																												2.08		
Long Lake	Trinity	1.40	1.15	T.	T.																											4.60		
Longview	Sabine.	1.90	1.68		1.74																											8.38		
Lubbock.	Brazos.	.44	.02	.11	.08																											1.53		
Lufkin.	Neches.	T.	.22	.02	.16																											1.42		
Luling	Guadalupe.	.90	7.57	.04	.05	.03																										10.12		
Lyford.	Coast.																																	
McGregor.	Brazos.	1.45	1.25																														3.35	
McKinney.	Trinity	1.08	.02	1.40	.42																											2.61		
Marathon.	Rio Grande.	.20	.40																														1.85	
Marble Falls	Colorado.	1.00	2.30	.30	.43																											6.18		
Maria.	Rio Grande.	.30																															0.90	
Marshall.	Sabine.	.52	2.20		.18																											5.67		
Matagorda.	Coast.	.09	.02	.01																												7.38		
Mexia	Brazos.	.18	2.70	.22	.05	.03																									5.55			
Midland.	Colorado.	.27	.30	.20	1.15																										2.60			
Mission	Rio Grande.																																	
Mont Belvieu.	Nueces.	.82	1.42	1.04	.80																											5.04		
Mount Blanco.	Brazos.	.51		.50																												2.37		
Nacogdoches	Neches.	.20	.83	.12	.03																											3.81		
New Braunfels.	Guadalupe.	7.97	4.57																													12.78		
Palestine.	Trinity	1.59	.04	.02	.19	T.																									4.09			
Panter.	Brazos.	.30	.50	.40	.10																										3.30			
Pearl.	Nueces.	3.12	.43	.09																											3.64			
Pierce	Colorado.	.07	.09	.10		3.73																									7.43			
Plainview.	Brazos.	.05	.08																													1.24		
Port Lavaca.	Coast.																																	
Post.	Brazos.	.87	.15	.24																												1.92		
Putnam.	do.	.40	1.00	1.27	.80																										3.77			
Raymondville	Coast.	.05	.15																													2.12		
Ricardo.	Rio Grande.	.30	T.	.15	T.																										0.45			
Rio Grande	Rio Grande.																														0.00			
Riverside	Trinity	.40	1.75	.20	T.	1.50																								5.12				
Rockland	Neches.	.35																													2.20			
Rockport.	Coast.	.25	T.	T.	.20																										1.07			
Rossville.	Nueces.	2.25	6.53	.05	.17																										9.94			
Runge.	San Antonio.	1.29																													2.34			
Sabinal.	Nueces.	5.36	3.17	.08																											9.54			
Salado.	Brazos.	3.60	.70	.26																											6.06			
San Angelo.	Colorado.	.53	1.80	.72	.14																										T.	3.19		
San Antonio.	San Antonio.	5.98	1.78	.38																											8.86			
San Augustine.	Neches.	.38	.20		.10	.10																									2.75			
San Juanito.	Coast.	.13	T.	.10																											1.46			
San Marcos	Guadalupe.	1.15	13.03	.15																											15.54			
San Saba.	Colorado.	.95	1.82	.21	.20																										5.64			
Santa Anna.	do.																																	
Santa Gertrudes	Coast.	</																																

TABLE 3.—Maximum and minimum temperatures for October, 1913. District No. 8, Texas and Rio Grande Valley.

Date.	Colorado.				New Mexico.										Texas.													
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountain-air.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Spring.		Brownsville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.	65	41	60	42	83	47	82	63	80	50	76	42	72	40	70	58	66	51	77	55	78	67	86	65	86	76	85	78
2.	69	43	63	32	80	59	75	60	65	43	63	47	68	40	69	60	63	50	72	57	68	63	76	62	88	74	82	78
3.	54	36	61	40	82	58	77	51	72	44	75	46	66	48	74	51	64	43	75	52	74	65	76	62	87	72	82	77
4.	62	32	55	35	77	48	81	54	75	40	68	42	66	48	77	53	59	39	73	49	83	62	79	60	89	72	84	75
5.	64	31	68	36	78	43	84	45	73	39	76	39	65	43	79	48	63	40	78	49	86	84	84	59	93	74	87	76
6.	58	31	51	35	78	50	84	54	74	39	71	36	66	48	78	54	57	38	73	46	86	69	87	61	90	77	84	77
7.	63	16	57	21	81	40	84	47	75	29	71	28	67	32	77	45	61	34	77	42	84	66	88	58	92	76	87	75
8.	66	18	61	26	76	43	86	56	76	30	72	34	70	35	80	46	64	38	78	33	84	62	86	61	91	73	87	75
9.	58	18	58	25	80	46	82	51	82	34	65	36	60	38	76	50	60	40	72	45	86	67	88	65	89	75	85	77
10.	49	21	46	26	77	51	84	61	80	33	60	38	63	42	78	52	50	34	65	48	84	59	86	68	89	76	86	77
11.	60	14	56	16	80	45	80	40	72	28	65	24	68	34	74	41	60	32	76	34	72	48	77	49	80	70	87	74
12.	67	19	69	21	83	48	83	43	82	32	76	28	70	38	78	39	70	36	79	36	79	50	84	54	82	72	82	67
13.	71	23	70	36	84	53	85	45	77	36	74	36	70	48	78	52	63	44	78	44	79	59	85	60	82	61	80	67
14.	73	24	67	31	86	55	87	45	82	44	75	39	76	50	84	54	66	44	82	44	79	70	86	58	85	61	80	67
15.	69	30	67	24	72	51	82	52	76	37	70	38	65	42	70	52	63	43	70	46	78	62	84	58	85	63	83	70
16.	58	20	59	31	78	45	73	45	72	34	68	34	66	37	66	44	60	44	61	42	70	52	72	58	87	73	82	76
17.	57	23	52	20	79	34	71	54	76	32	68	40	67	32	67	51	57	35	61	43	67	56	68	48	90	69	78	66
18.	54	18	47	18	76	41	70	52	78	34	61	33	62	32	70	48	54	34	67	45	57	44	57	44	78	66	67	60
19.	55	27	49	19	72	41	65	48	76	30	60	22	63	30	60	40	52	31	55	33	57	43	57	47	71	59	70	56
20.	63	20	56	20	74	34	70	37	72	26	62	21	63	37	68	29	57	28	64	29	68	53	72	48	73	51	66	
21.	54	18	60	23	79	33	84	38	72	30	68	33	68	35	79	37	61	34	75	35	75	49	77	48	78	55	76	60
22.	57	25	55	24	76	55	78	55	74	43	63	41	63	43	62	44	57	36	66	49	67	50	73	51	83	71	83	65
23.	67	23	63	24	80	34	77	41	74	29	70	29	70	35	72	36	63	35	74	33	70	41	70	41	79	57	73	56
24.	67	23	67	22	80	36	80	41	70	38	73	36	70	38	75	37	67	39	75	35	77	45	77	50	81	51	82	52
25.	64	18	66	24	84	35	89	39	76	32	70	32	72	38	82	39	66	33	79	39	82	52	83	30	84	59	79	66
Mns..	60.4	22.4	57.8	25.5	77.2	43.2	78.8	45.4	73.7	32.9	67.6	33.4	66.3	37.8	70.0	44.0	59.4	36.2	69.9	40.6	72.3	51.0	75.1	50.8	83.0	64.5	78.6	65.2

Date.	Texas.																											
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.	80	71	84	59	86	75	83	63	76	70	84	72	79	74	79	72	80	66	75	69	75	60	74	68	80	65	73	68
2.	77	69	78	61	81	70	73	63	72	68	82	78	81	74	83	70	80	72	75	66	75	56	75	70	79	64	75	67
3.	82	68	82	58	86	74	77	60	74	66	81	72	86	73	82	71	84	68	79	67	76	54	84	71	77	63	80	69
4.	87	69	77	54	94	74	80	58	83	67	80	75	82	74	82	73	78	69	78	70	81	58	87	73	83	72	83	72
5.	88	70	78	58	97	73	88	54	90	71	84	75	83	73	87	73	89	65	82	70	84	47	90	73	88	59	88	72
6.	87	75	78	61	95	76	87	55	88	69	85	77	89	74	90	73	90	68	86	66	88	54	88	73	90	66	89	70
7.	88	68	82	50	95	69	88	55	86	70	84	76	88	74	92	89	72	86	87	67	82	47	91	67	81	67	92	71
8.	87	67	82	52	92	74	91	64	86	66	85	75	88	74	91	70	88	65	88	68	80	52	88	68	86	57	89	68
9.	85	73	75	59	94	78	87	63	84	65	84	73	88	68	88	70	88	71	86	69	77	57	87	71	84	64	86	66
10.	81	71	77	59	95	75	85	62	85	65	85	78	89	71	90	72	89	70	87	77	88	58	88	72	87	57	87	71
11.	83	67	79	49	92	78	79	49	73	53	84	70	80	69	81	67	88	61	77	59	73	36	80	65	74	44	78	60
12.	82	61	84	52	90	82	88	55	75	48	74	68	78	60	77	60	80	50	73	52	82	43	81	58	78	47	78	55
13.	80	61	85	64	89	74	87	58	76	52	74	66	80	58	77	56	76	51	76	52	76	39	79	56	83	54	78	51
14.	80	59	87	63	90	59	90	56	78	56	79	69	81	53	81	59	80	50	77	51	83	54	80	56	82	46	81	54
15.	82	64	74	55	84	58	80	63	79	60	79	74	84	62	83	67	85	61	82									